# IR-710 / IR-711UB

## Industrial Cellular VPN Router

# User's Manual

**Version 1.0**

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www.oring-networking.com

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# Getting to Know your Router

## 1.1 Overview

The ORing IR-710 / IR-711UB router is designed to operate in industrial environment. The router provides a fast and effective ways of communicating to the internet over wired LAN.

With built-in HSUPA WAN connection (IR-710) or an external USB modem (IR-711UB), the ORing IR-710 / IR-711UB router can be mounted in harsh environment easily to provide internet access anytime and anywhere.

The ORing IR-710 / IR-711UB router's VPN capability creates encrypted "Virtual Tunnels" through the internet, allowing remote or traveling users for secured connection with the network in your office.

## 1.2 Software Features

- Secured Management by HTTPS
- Intuitive Web-based management user interface for simply and easily operation.
- Functions of firewall provides many security features such as blocking attacks from hacker, especially IP Spoofing, Ping flood, Ping of Death, DoS, DRDoS, Stealth Scan, etc.
- Advanced firewall configuration to extend the capability and security, such as Virtual Server, Port Trigger, DMZ host, UPnP auto Forwarding, IP Filter and MAC filter.
- Event Warning by Syslog, Email, SNMP Trap, Relay and Beeper

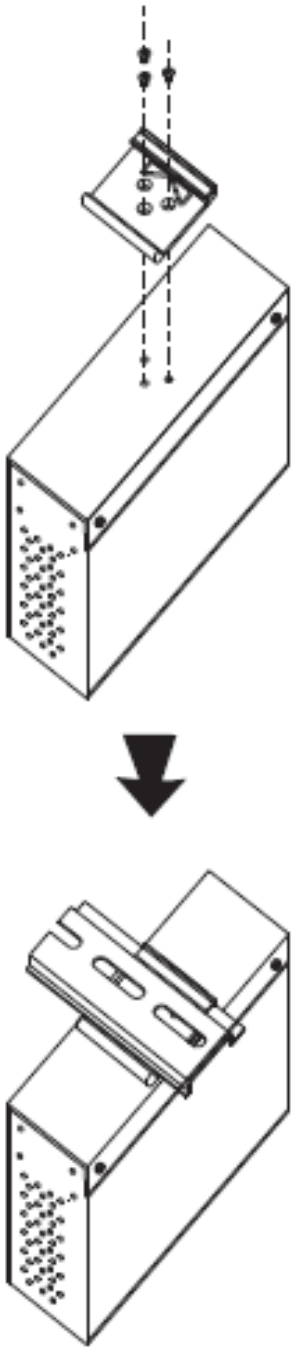
## 1.3 Hardware Features

- Built-in HSUPA Cellular Modem with SIM card slot included for WAN connection (IR-710)
- USB port for installing user-selectable 3G USB modem for WAN connection (IR-711UB)
- 10/100Base-T(X) Ethernet ports for LAN connection individually.
- Power Inputs: 12~48 VDC
- Casing: IP-30
- Operating Temperature: -10 to 55°C
- Storage Temperature: -40 to 85°C
- Operating Humidity: 5% to 95%, non-condensing

# Hardware Installation

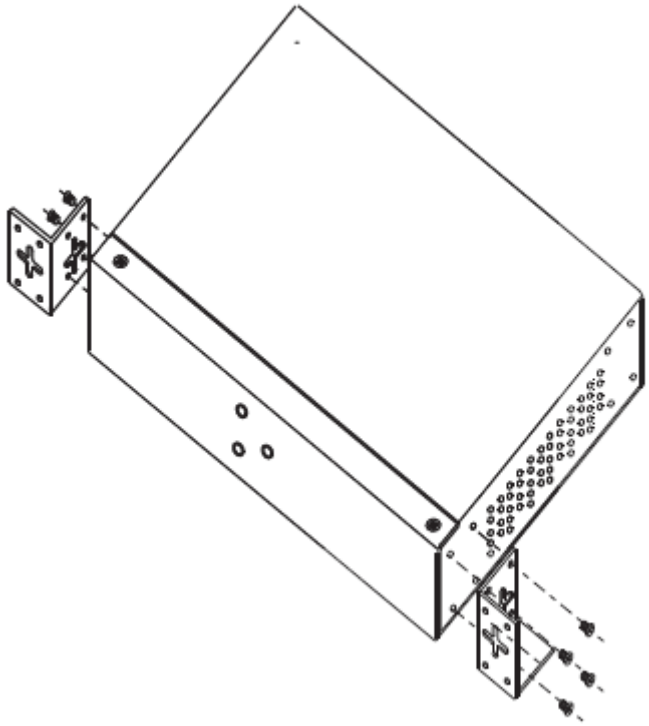
## 2.1 DIN-Rail Installation

IR-710 / 711UB has DIN-Rail Kit on rear panel. The DIN-Rail kit helps AP to fix on the DIN-Rail. It is easy to install the router on the DIN-Rail.



## 2.2 Wall-Mounted Installation

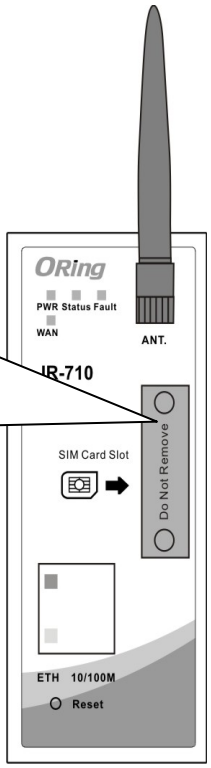
IR-710 / 711UB has another installation method to secure the router. A wall mount panel can be found in the package.



## 2.3 SIM Card Installation (IR-710 only)

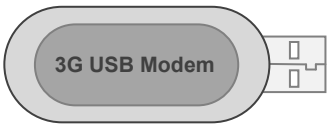
With IR-710 POWERED DOWN :

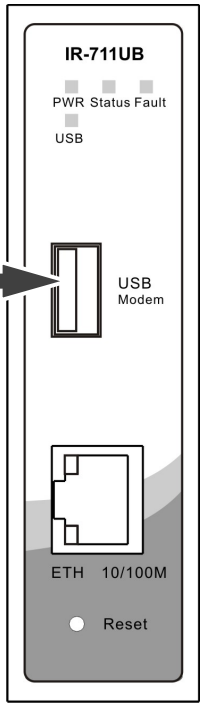
1. Un-fasten the screws.
2. Remove the cover.
   (NOTE : The cover removal is only for SIM card installation. DO NOT remove the cover in normal operation.)
3. Install SIM card into its slot.
4. Replace the cover.
5. Fasten the screws.




**Important Notice: POWER DOWN THE IR-710 BEFORE INSTALLING SIM CARD.**

## 2.4 3G USB Modem Installation (IR-711UB only)



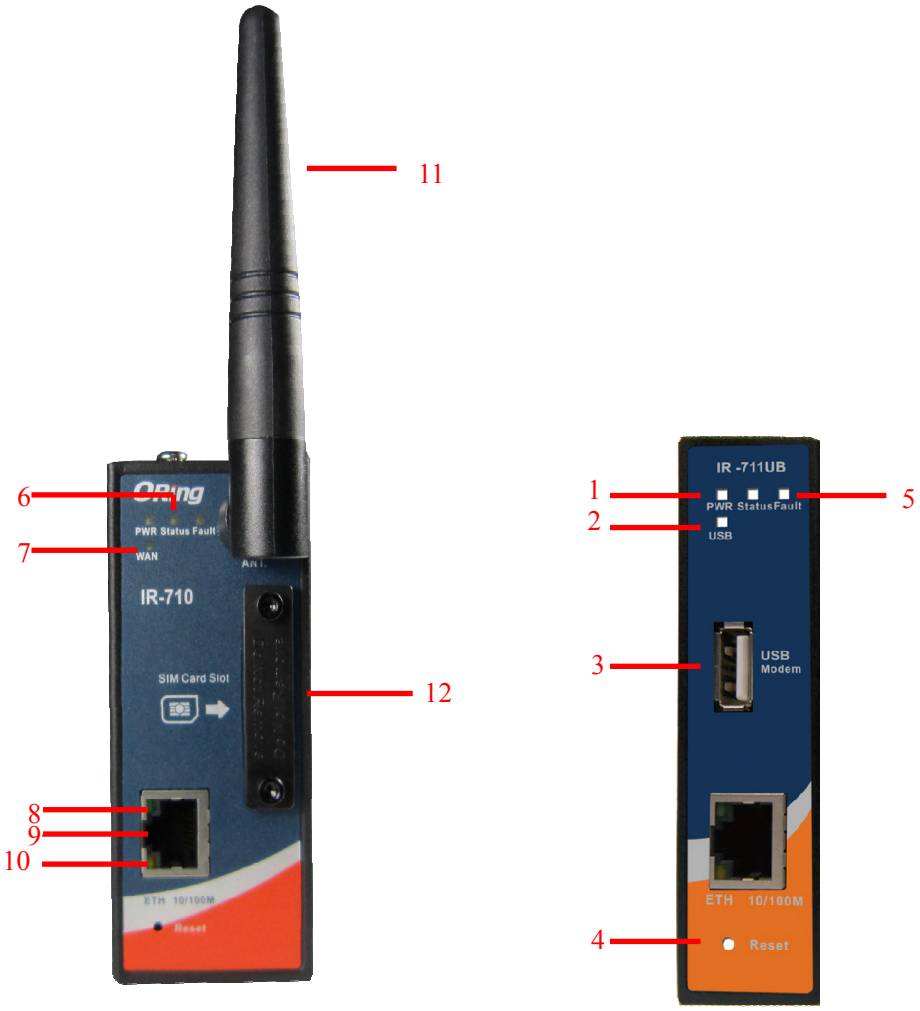

NOTE: USB modems (not included in the package) that are tested to be compatible with IR-711UB are listed in the **Technical Specifications** section.

# Hardware Overview

## 3.1 Front Panel

The following table describes the labels that stick on the IR-710 / IR-711UB

| Port | Description |
|---|---|
| **10/100 Base-T(X)**<br>**Fast Ethernet Ports** | 10/100Base-T(X) fast Ethernet ports support auto-negotiation.<br>Default Setting :<br>Speed: auto |



1. LED for PWR. When the PWR links, the green LED will light On.
2. LED for USB modem status (IR-711UB only)
3. USB port for 3G USB modem connection LED for Ethernet ports link status (IR-711UB only)
4. Reset button. Push the button 5 seconds for factory default.
5. LED for Fault Relay. When the fault occurs, the red LED will light On.
6. LED for Status. When the system is ready, the green LED will light On.
7. LED for WAN. When the cellular modem link up, the green LED will light On (IR-710 only).
8. LED for Ethernet port active
9. 10/100Base-T(X) RJ45 fast Ethernet port
10. LED for Ethernet ports speed
11. 850/900/1800/2100MHz antenna for internal HSUPA modem (IR-710 only)
12. Cellular Modem with SIM card slot (IR-710 only)

## 3.2 Front Panel LEDs

| LED | Color | Status | Description |
|---|---|---|---|
| **PWR** | Green | Green On | DC power activated. |
| **Status** | Green | Green On | Power is On. |
| | | Green Blinking | Booting up |
| **WAN** | Green | Green On | Modem Ready |
| | | Green Blinking | Checking Modem status |
| **Fault** | Red | Red On | Fault relay. Power failure or Port down/fail. |
| **10/100Base-T(X) Fast Ethernet Ports** | | | |
| **10Beae-T** | Amber | Amber On | Port speed to 10Base-T |
| **100Base-T(X)** | Green | Green On | Port speed to 100Base-TX |

# Cables and Antenna

## 4.1 Ethernet Cables

The IR-710 / IR-711UB router has one 10/100Base-T(X) Ethernet ports. According to the link type, use CAT 3, 4, 5,5e UTP cables to connect to any other network device (PCs, servers, switches, routers, or hubs). Please refer to the following table for cable specifications.

Cable Types and Specifications

| Cable | Type | Max. Length | Connector |
|---|---|---|---|
| 10Base-T | Cat. 3, 4, 5 100-ohm | UTP 100 m (328 ft) | RJ45 |
| 100Base-T(X) | Cat. 5 100-ohm UTP | UTP 100 m (328 ft) | RJ45 |

## 4.2 10BASE-T/100BASE-T(X) Pin Assignments

With 10Base-T/100Base-T(X) cable, pins 1 and 2 are used for transmitting data, and pins 3 and 6 are used for receiving data.

RJ45 Pin Assignments

| Pin Number | Assignment |
|---|---|
| 1 | TD+ |
| 2 | TD- |
| 3 | RD+ |
| 4 | Not used |
| 5 | Not used |
| 6 | RD- |
| 7 | Not used |
| 8 | Not used |

The IR-710 / 711UB routers supports auto MDI/MDI-X operation. You can use a straight-through cable to connect PC and AP. The following table below shows the 10Base-T/ 100Base-T(X) MDI and MDI-X port pin outs.

MDI/MDI-X pins assignment

| Pin Number | MDI port | MDI-X port |
|---|---|---|
| 1 | TD+(transmit) | RD+(receive) |
| 2 | TD-(transmit) | RD-(receive) |
| 3 | RD+(receive) | TD+(transmit) |
| 4 | Not used | Not used |
| 5 | Not used | Not used |
| 6 | RD-(receive) | TD-(transmit) |
| 7 | Not used | Not used |
| 8 | Not used | Not used |

**Note:** "+" and "-" signs represent the polarity of the wires that make up each wire pair.

## 4.3 Wireless Antenna (IR-710 only)

850/900/1800/2100MHz antenna is used for built-in HSUPA modem. External RF cable and antenna also can be applied with this connector.

Cellular Antenna (IR-710 only)

# Management Interface

## 5.1 First-time Installation

Before installing IR-710 / IR-711UB router, you need to access the router by a computer equipped with an Ethernet card. Using an Ethernet card to connect to LAN port is easier and is recommended.

Basic connection for IR-710 / IR-711UB

**Step 1: Select the Power Source**

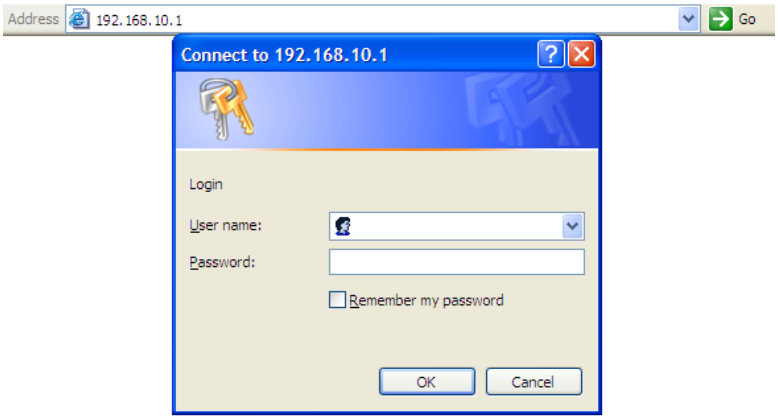
IR-710/IR711UB router can be powered by +12~48V DC power input.

**Step 2: Connect a computer to IR-710/IR711UB**

Use either an Ethernet cable to connect to ETH of IR-710/IR711UB router to a computer. If the LED of the LAN port lights up, it indicates the connection is established. After that, the computer will initiate a DHCP request to get an IP address from the router.

**Step 3: Use the web-based manager to configure IR-710/IR711UB**

The default gateway IP of IR-710/IR711UB router is 192.168.10.1. Start the web browser of your computer and type http://192.168.10.1 in the address box to access the webpage. A login window will popup, and then enter the default login name **admin** and password **admin.**

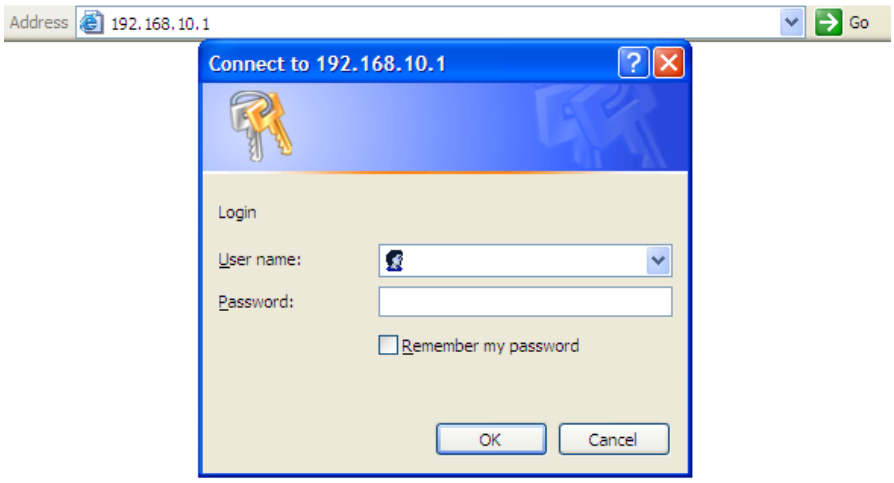



Login screen

## 5.2 Router Configuration

In this section, the web management page will be explained in detail.

With default setting, you can type http://192.168.10.1 in the address box of web browser to login the web management interface. A login window will be prompted, enter username **admin** & password **admin** to login.

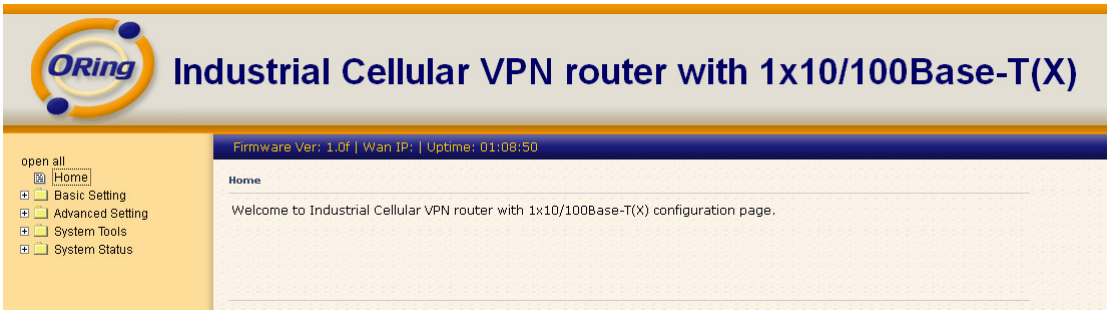



Login screen

For security reasons, we strongly recommend you to change the password. Click on **System Tools > Login Setting** and change the password.

## 5.3 Main Interface

The **Home** screen will be shown when login successfully.




Main Interface

In the page, you can check the Firmware version, the router running time and the WAN IP setting.

The following table describes the labels in this screen.

| Label | Description |
|---|---|
| **Firmware** | Show the current firmware version. |
| **Uptime** | Show the elapsed time since the AP router is started. |
| **Wan IP** | Show the WAN IP address. |

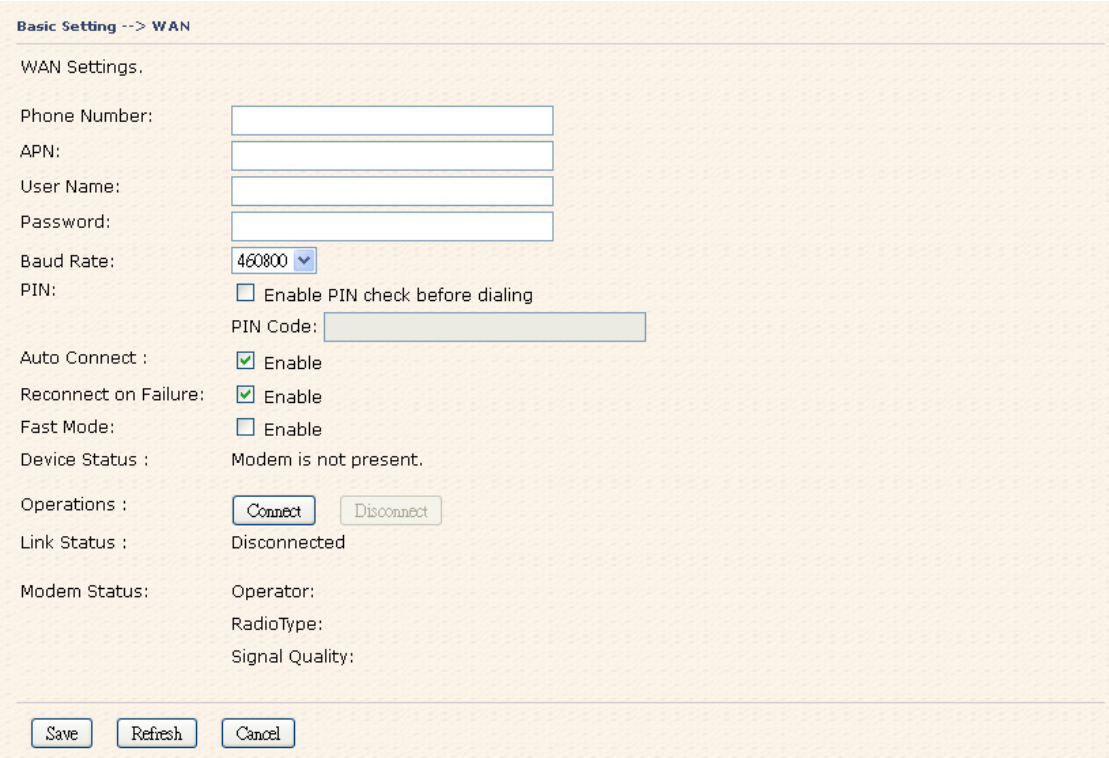
### 5.3.1 Basic Setting

#### WAN

The IR-710 / IR-711UB router provides Modem/3G connection.

**WAN Connection Type: Modem / 3G**

For using this type of connection, use the built-in HSUPA modem.




Modem/3G Screen

The following table describes the labels in this screen.

| Label | Description |
|---|---|
| **Phone Number** | Telephone number provided by your ISP. |
| **APN** | Enter the APN value it is optional |
| **User Name** | User name provided by your ISP. |
| **Password** | Password provided by your ISP. |
| **PIN** | Enter the PIN code if PIN check is required. |
| **Auto Connect** | If this option is enabled, the connection will be called up when router boots up. |
| **Device Status** | Show the status of built-in HSUPA modem device. |
| **Operations** | Click "**Connect**" to call up the built-in HSUPA modem. Click "**Disconnect**" to shut down the connection. |
| **Link Status** | Show the status of connection, **up**, **down** or **connecting**. |

## LAN

These are the IP settings of the LAN interface for the IR-710 / IR-711UB router. The LAN IP address is privately for your internal network and cannot be exposed on the Internet.

LAN Screen

The following table describes the labels in this screen.

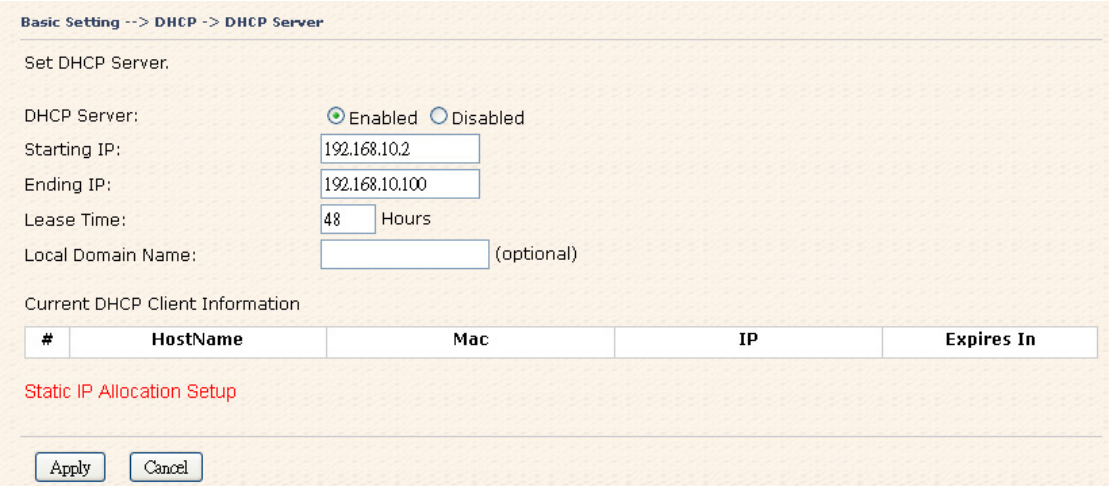
| Label | Description |
|---|---|
| **IP Address** | The IP address of the LAN interface, the default IP address is 192.168.10.1 |
| **Subnet Mask** | The Subnet Mask of the LAN interface, the default Subnet mask is 255.255.255.0 |

## DHCP

DHCP stands for Dynamic Host Control Protocol. The IR-710 / IR-711UB was built-in DHCP server. The internal DHCP server will assign an IP address to the computers (DHCP client) on the LAN automatically.

Set your computers to be DHCP clients by setting their TCP/IP settings to obtain an IP address automatically. The DHCP server will allocate an unused IP address from the IP address pool to the requesting computer automatically.

### 1. DHCP Sever



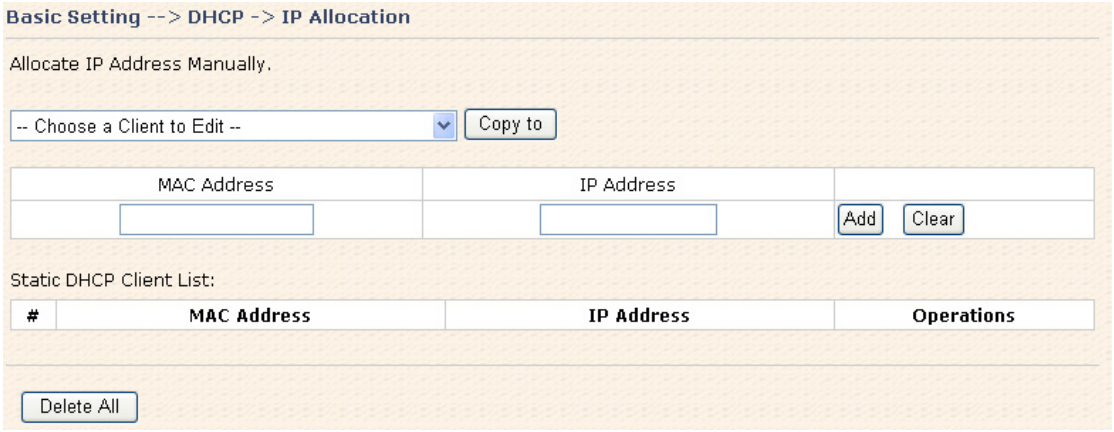

DHCP Server Screen

The following table describes the labels in this screen.

| Label | Description |
|---|---|
| **DHCP Server** | Enable or Disable the DHCP Server. The default setting is Enable |
| **Starting IP** | The starting IP address of the IP range for the DHCP server |
| **Ending IP** | The ending IP address of the IP range for the DHCP server |
| **Lease Time** | The period of time for the IP to be leased. Enter the Lease time. The default setting is 48 hours. |
| **Local Domain Name** | Enter the local domain name of private network. It is optional. |
| **Current DHCP Client Information** | List of the computers on your network that are assigned an IP address by internal DHCP server. |

**2. IP Allocation**

The IP Allocation provides one-to-one mapping of MAC address to IP address. When computers with the MAC address requesting an IP from the IR-710 / IR-711UB router, it will be assigned with the IP address according to the mapping. You can choose one from the client lists and add it to the mapping relationship.




IP Allocation Screen

The following table describes the labels in this screen.

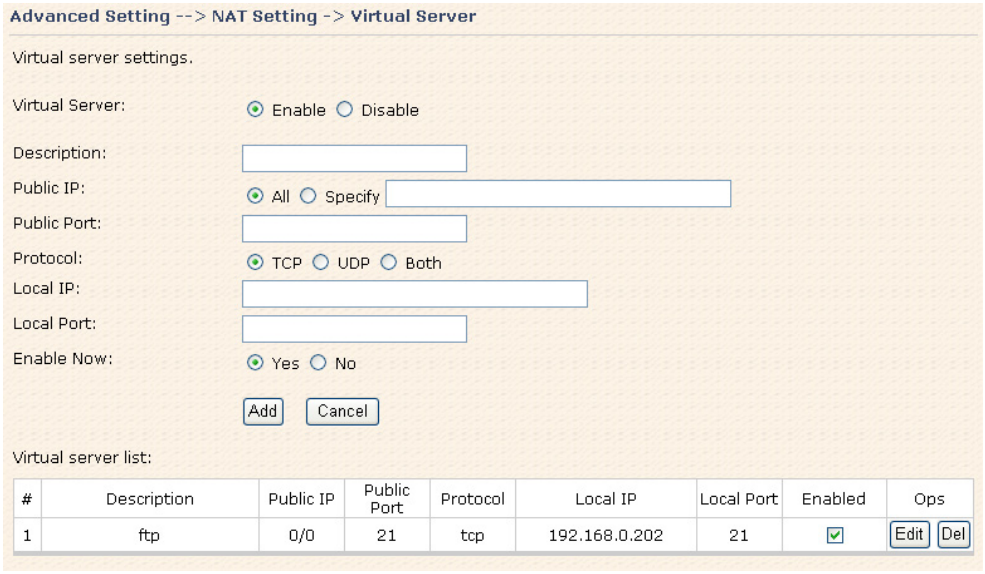
| Label | Description |
|---|---|
| **Choose a Client to Edit** | The list shows the MAC addresses and IP addresses that are already assigned by TAR-120-M12 / TAR-3120-M12. Choose one from the list and click **Copy to** button for editing. |
| **MAC Address** | The MAC addresses of the computer. |
| **IP Address** | The IP address to be related to the MAC address. |
| **Static DHCP Client List** | The list shows the MAC address and IP address one-to-one relationship. |

## 5.3.2 Advanced Settings

### NAT Setting

#### 1. Virtual Server

Virtual Server is used for setting up public services on the LAN, such as DNS, FTP and Email. Virtual Server is defined as a Local Port to the LAN servers, and all requests from Internet to this Local port will be redirected to the computer specified by the Local IP. Any PC that was used for a virtual server must have static or reserved IP Address because its IP address may change when requesting IP by DHCP.


Advanced Setting --> NAT Setting -> Virtual Server
Virtual server settings.
Virtual Server: Enable Disable
Description:
Public IP: All Specify
Public Port:
Protocol: TCP UDP Both
Local IP:
Local Port:
Enable Now: Yes No
Add Cancel
Virtual server list:
# Description Public IP Public Port Protocol Local IP Local Port Enabled Ops
1 ftp 0/0 21 tcp 192.168.0.202 21 Edit Del

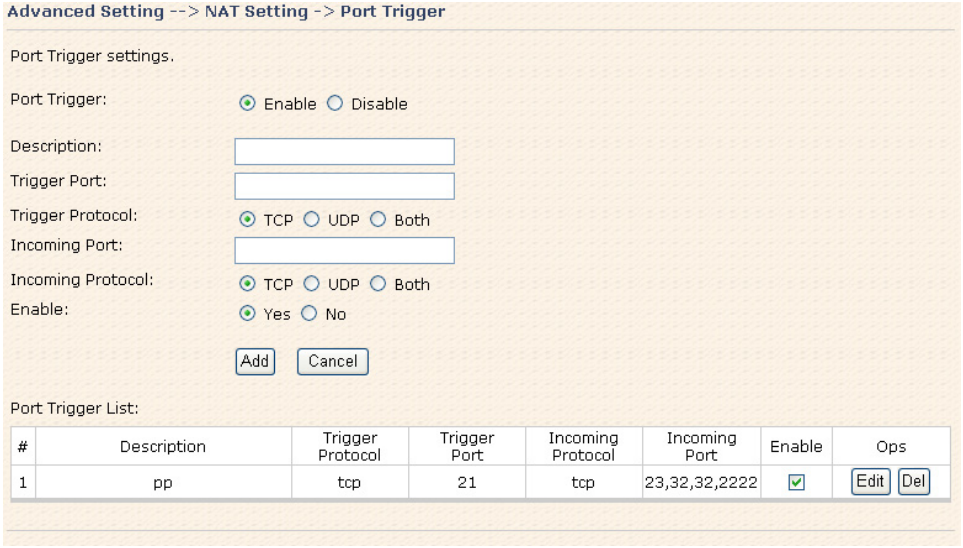
Virtual Server

The following table describes the labels in this screen.

| Label | Description |
|---|---|
| **Virtual Server** | Enable or disable Virtual Server. |
| **Description** | Enter the description of the entry. Acceptable characters consist of '**0-9**', '**a-z**', '**A-Z**'. This field accepts null value. |
| **Public IP** | Enter the public IP that is allowed to access the virtual service, if not specified, choose All. |
| **Public Port** | The port number on the WAN (Wide Area Network) side that will be used to access the virtual service. |
| **Protocol** | The protocol used for the virtual service. |
| **Local IP** | The IP of the computer that will be providing the virtual service. |
| **Local Port** | The port number of the service used by the Private IP computer. |
| **Enable Now** | Enable the virtual server entry after adding it. |
| **Virtual server list** | Click **Edit** to edit the virtual service entry, **Del** to delete the entry. |

**2. Port Trigger**

Some applications require multiple connections, like Internet games, video conferencing, Internet calling and so on. These applications cannot work with a pure NAT router. Port Trigger is used for some of the applications that can work with an NAT router.


Advanced Setting --> NAT Setting -> Port Trigger
Port Trigger settings.
Port Trigger: Enable Disable
Description:
Trigger Port:
Trigger Protocol: TCP UDP Both
Incoming Port:
Incoming Protocol: TCP UDP Both
Enable: Yes No
Add Cancel
Port Trigger List:
# Description Trigger Protocol Trigger Port Incoming Protocol Incoming Port Enable Ops
1 pp tcp 21 tcp 23,32,32,2222 Edit Del

Port Trigger Screen

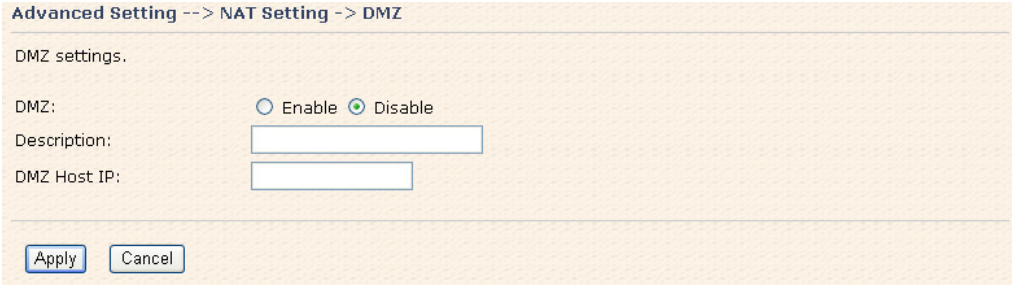
The following table describes the labels in this screen.

| Label | Description |
|---|---|
| **Port Trigger** | Enable or disable Port Trigger. |
| **Description** | This is the description for the entry. |
| **Trigger Port** | This is the port used to trigger the application. |
| **Trigger Protocol** | This is the protocol used to trigger the application. |
| **Incoming Port** | This is the port number on the WAN side that will be used to access the application. |
| **Enable** | Enable the rule after adding the entry. |
| **Port Trigger List** | Click **Edit** to edit the entry, click **Del** to delete the entry. |

**3. DMZ**

It allows a computer to be exposed to the Internet. This feature is useful for gaming purposes.

Enter the IP address of the internal computer that will be the DMZ host. Adding a client to the DMZ may expose your local network with variety of security risks, so only use this option carefully.



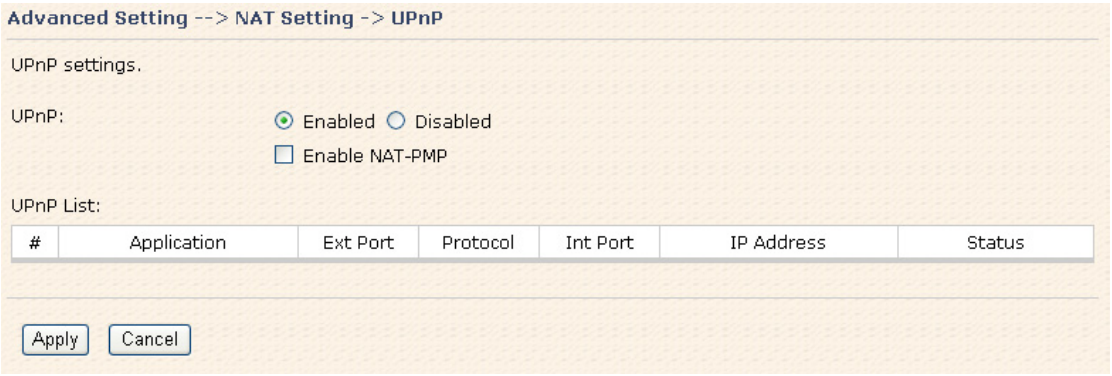

DMZ Screen

The following table describes the labels in this screen.

| Label | Description |
|---|---|
| **DMZ** | Enable or disable the DMZ. |
| **Description** | Description for the DMZ host entry. |
| **DMZ Host IP** | Enter the IP address of the computer to be in the DMZ. |

**4. UPnP**

The UPnP (Universal Plug and Play) feature allows the devices, such as Internet computers, to access the local host resources or devices as needed. UPnP devices can be automatically discovered by the UPnP service application on the LAN.




UPnP Screen

The following table describes the labels in this screen.

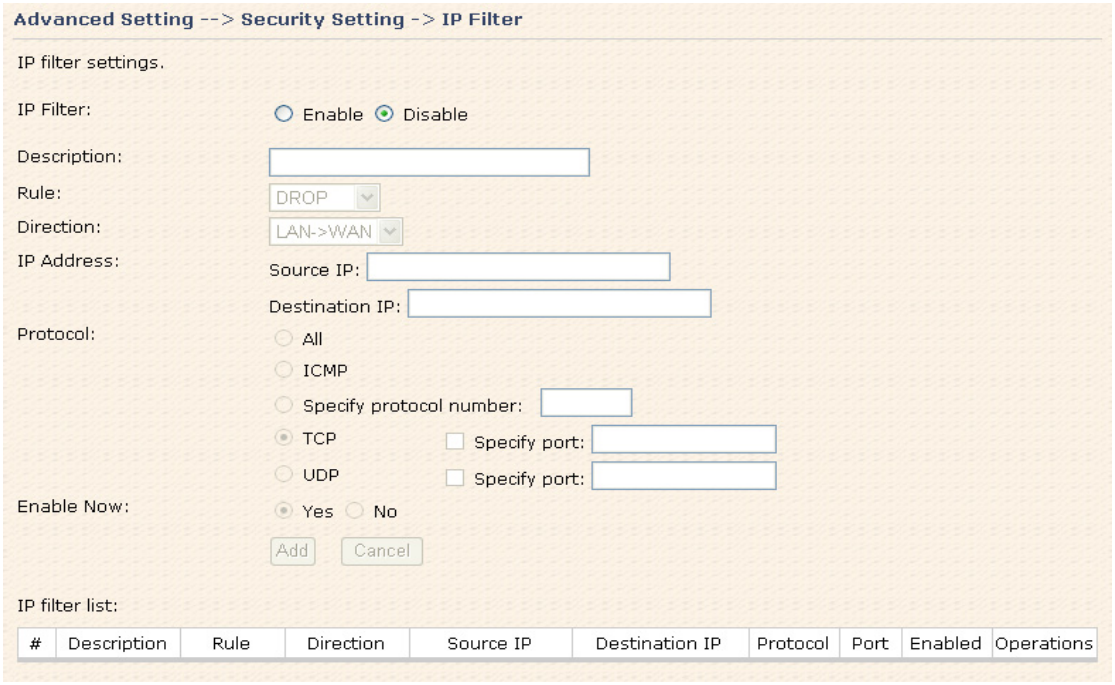
| Label | Description |
|---|---|
| **UPnP** | Enable or disable UPnP. |
| **Enable NAT-PMP** | NAT-PMP allows a computer in a private network (behind a NAT router) to automatically configure the router to allow parties outside the private network to contact with each other. NAT-PMP operates with UDP. It essentially automates the process of port |

| | |
|---|---|
| | forwarding. Check the box to enable NAT-PMP. |
| **UPnP List** | This table lists the current auto port forwarding information.<br>**Application:** The application that generates this port forwarding.<br>**Ext Port:** The port opened on WAN side.<br>**Protocol:** The protocol type.<br>**Int Port:** The port redirected to the local computer.<br>**IP Address:** The IP address of local computer to be redirected to.<br>**Status:** This status shows if the entry is valid or not. |

## Security Setting

### 1. IP Filter

Filters are used to deny or allow LAN computers from accessing the internet. It also allows or denies WAN hosts to access LAN computers.




IP Filter Screen

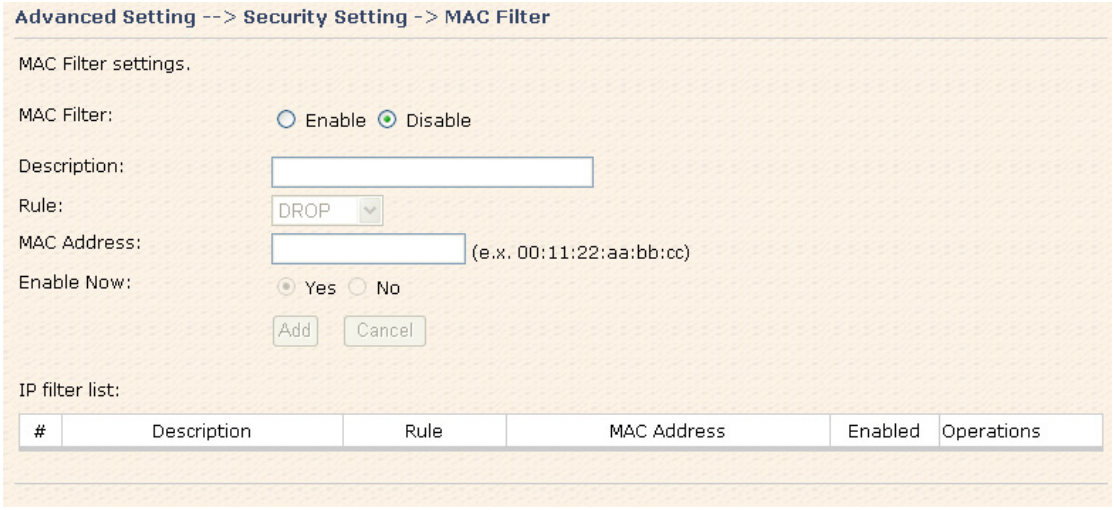
The following table describes the labels in this screen.

| Label | Description |
|---|---|
| **IP Filter** | Enable or disable the IP Filter. |
| **Description** | Enter description for the entry. |
| **Rule** | Select **DROP**, **ACCEPT** and **REJECT** rule for the entry. |
| **Direction** | Specify the direction of the data flow that is to be filtered. |

| | |
|---|---|
| **IP Address** | Enter the IP address of the source and destination computer. |
| **Protocol** | Choose which protocol to be filtered. |
| **Enable Now** | Enable the entry after adding it. |
| **IP filter list** | Click **edit** for editing the entry, click **Del** to delete the entry. |

**2. MAC Filter**

Filters are used to deny or allow LAN computers from accessing the internet, according to their MAC address.




MAC Filter Screen

The following table describes the labels in this screen.

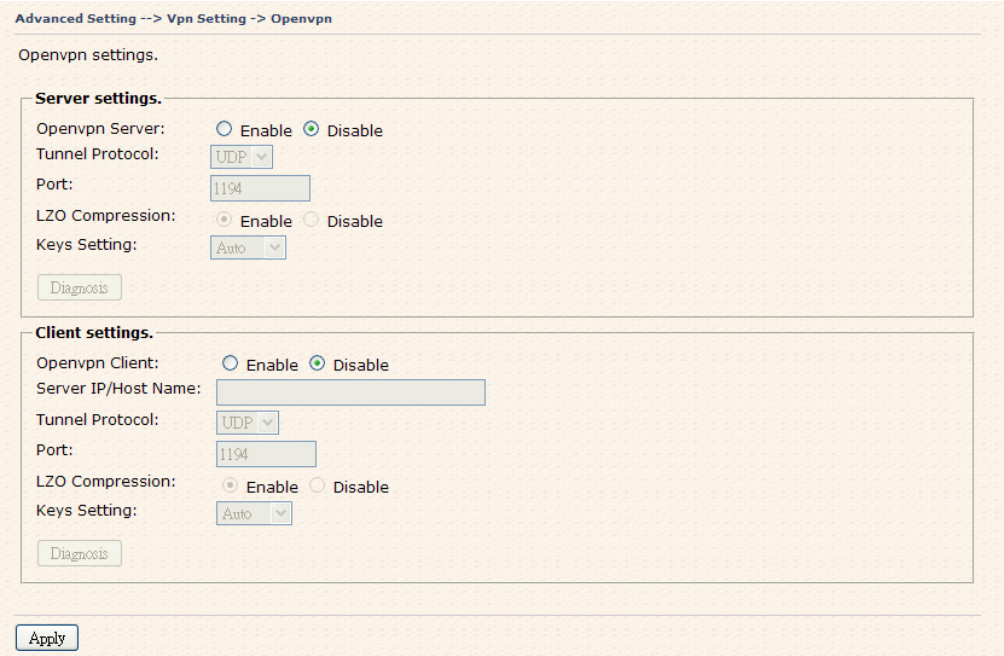
| Label | Description |
|---|---|
| **MAC Filter** | Enable or disable the MAC Filter. |
| **Description** | Enter the description for the entry. |
| **Rule** | Select **DROP**, **ACCEPT** and **REJECT** rule for the entry. |
| **MAC Address** | Enter the MAC address to be filtered. |
| **Enable Now** | Enable the entry after adding it. |
| **IP filter list** | Click **Edit** for editing the entry, click **Del** to delete the entry. |

## VPN Setting

VPN Setting is settings that are used to create virtual private tunnels to remote VPN gateways. The tunnel technology supports data confidentiality, data origin, authentication and data integrity of network information by utilizing encapsulation protocols, encryption algorithms, and hashing algorithms.

### 1. Open VPN

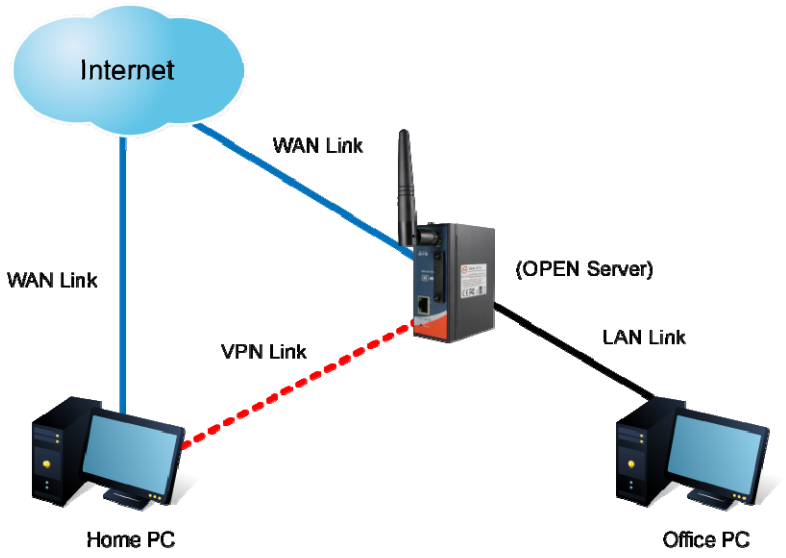
Open VPN is a full-functioned SSL VPN solution which can accommodates a wide range of configurations including remote access, site-to-site VPNs, WiFi security, and enterprise-scale remote access solutions with load balancing, failover, and fine-grained access-controls.




Open VPN Screen

The following topology shows the common use of VPN connection from WAN side.

### 1: Open VPN Server




Connection to Open VPN Server

Before connecting to the Open VPN server of IR-710 / IR-711UB router, please install Open VPN client software for your windows PC. It can be downloading from http://Open VPN.net/download.html#stablel. The current version of Open VPN used in IR-710 / IR-711UB is version 2.0.9. The corresponding software for client should be installed.

The following table describes the labels in this screen.

| Label | Description |
|---|---|
| **Open VPN Server** | Enable or disable the function of Open VPN Server. |
| **Tunnel Protocol** | Select UDP or TCP protocol. |
| **Port** | Input the number about the port, and the default is 1194. |
| **LZO Compression** | Enable or disable the function of LZO Compression. |
| **Keys Setting** | Select Auto to use the preset certificates, select Manual to paste your certificates. Please install Open VPN client software to generate your certificates and paste them here. For more information, please visit Open VPN website. |

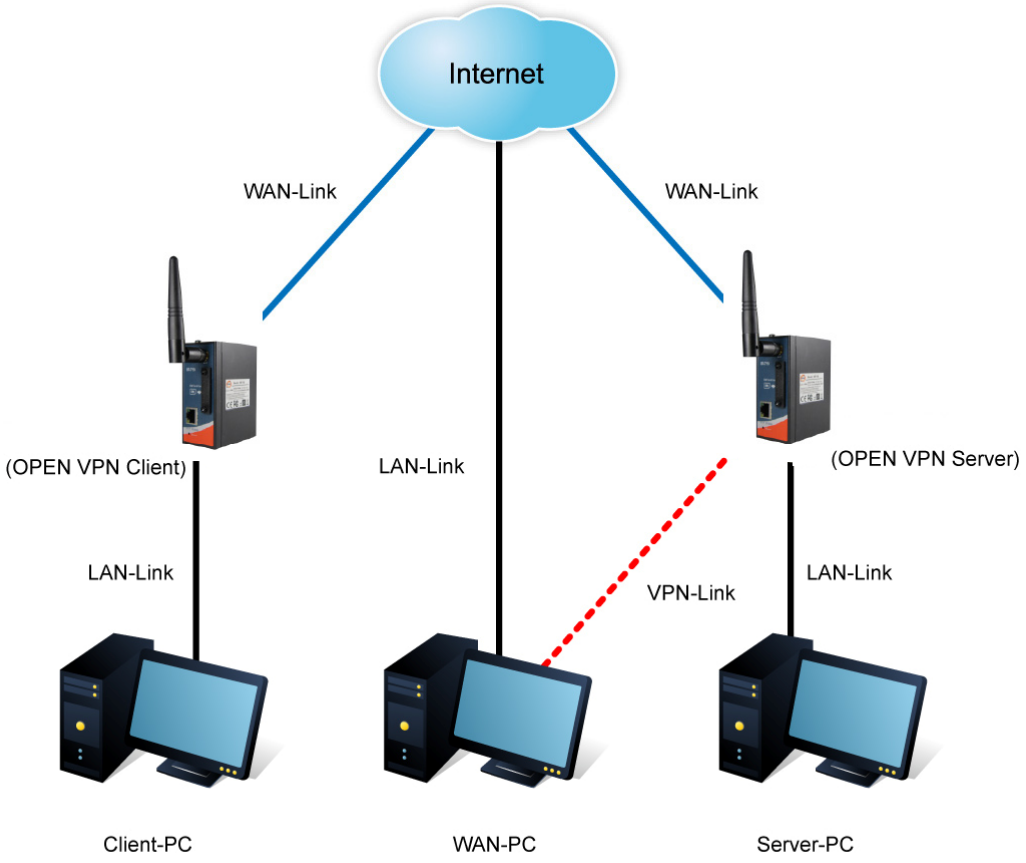
**2: Open VPN Client**

Two routers are needed for creating site-to-site VPN connection using this mode.

The following table describes the labels in this screen.

| Label | Description |
|---|---|
| **Open VPN Client** | Enable or disable the function of Open VPN Client. You can allow or deny the Open VPN Client with this option. |
| **Server IP** | Enter the Open VPN Server IP address. |
| **Tunnel Protocol** | Select UDP or TCP protocol. |
| **Port** | Enter the port number, default is 1194. |
| **LZO Compression** | Enable or disable the LZO Compression. |
| **Keys Setting** | Select **Auto** to use the preset certificates, select **Manual** to paste your certificates. Please install software for Open VPN client to generate your certificates and paste them here. For more information, please visit Open VPN website. |

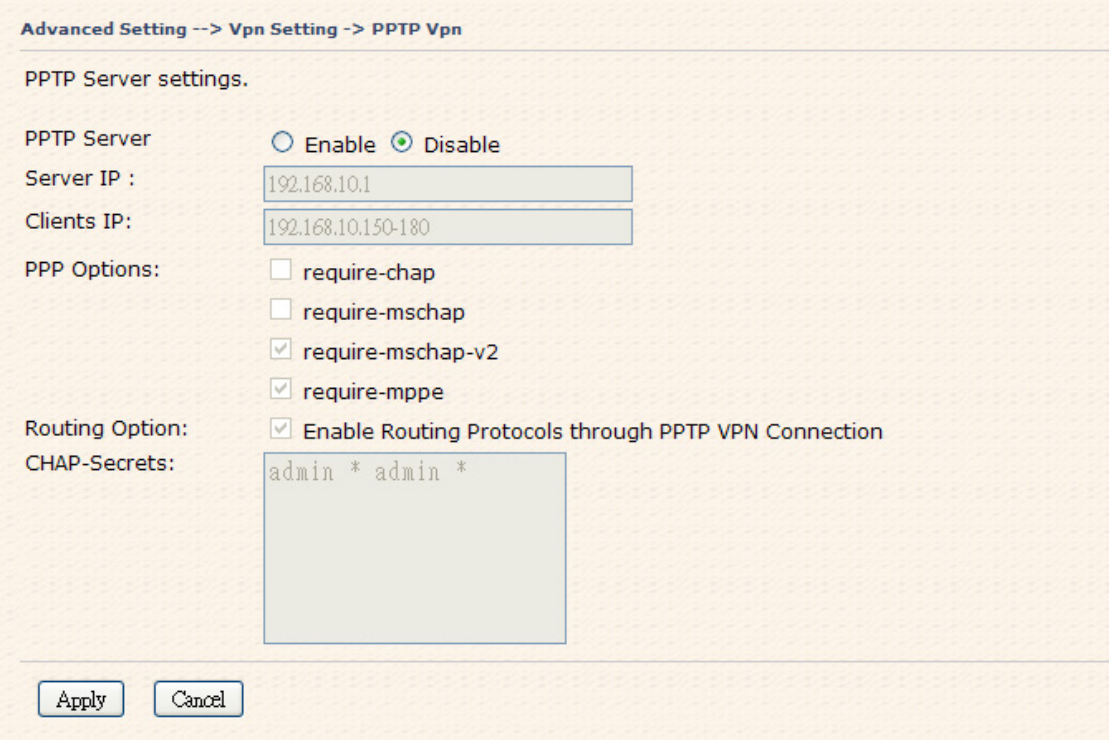
**3: Open VPN Server VS Client**




The chart above displays the connection of Open VPN Server and Client. The Server IP and Client IP address should configure with the same network domain.

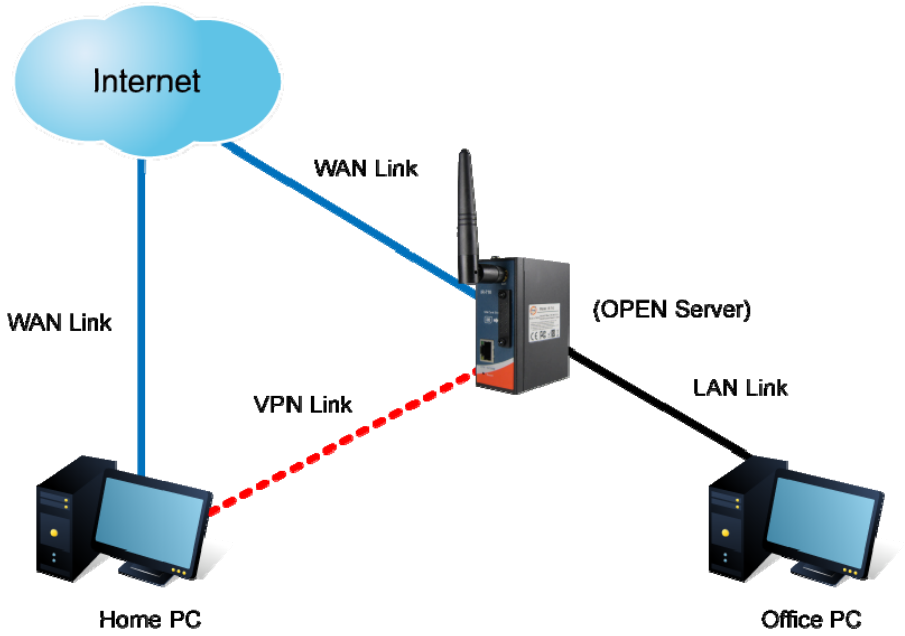
**2. PPTP VPN**

The PPTP (Point to Point Tunneling Protocol) VPN feature allows PC connected to the router from WAN port, just like connecting in the LAN. To create a PPTP connection to the router, you should create a PPTP network connection if you are using a window PC. The steps are: **Right click Network > property > create a new connection > connect to my work space (VPN) > use VPN to internet > enter the user name and password** which are set in the page.




PPTP VPN Screen

The following topology shows the common use of PPTP connection from the internet.



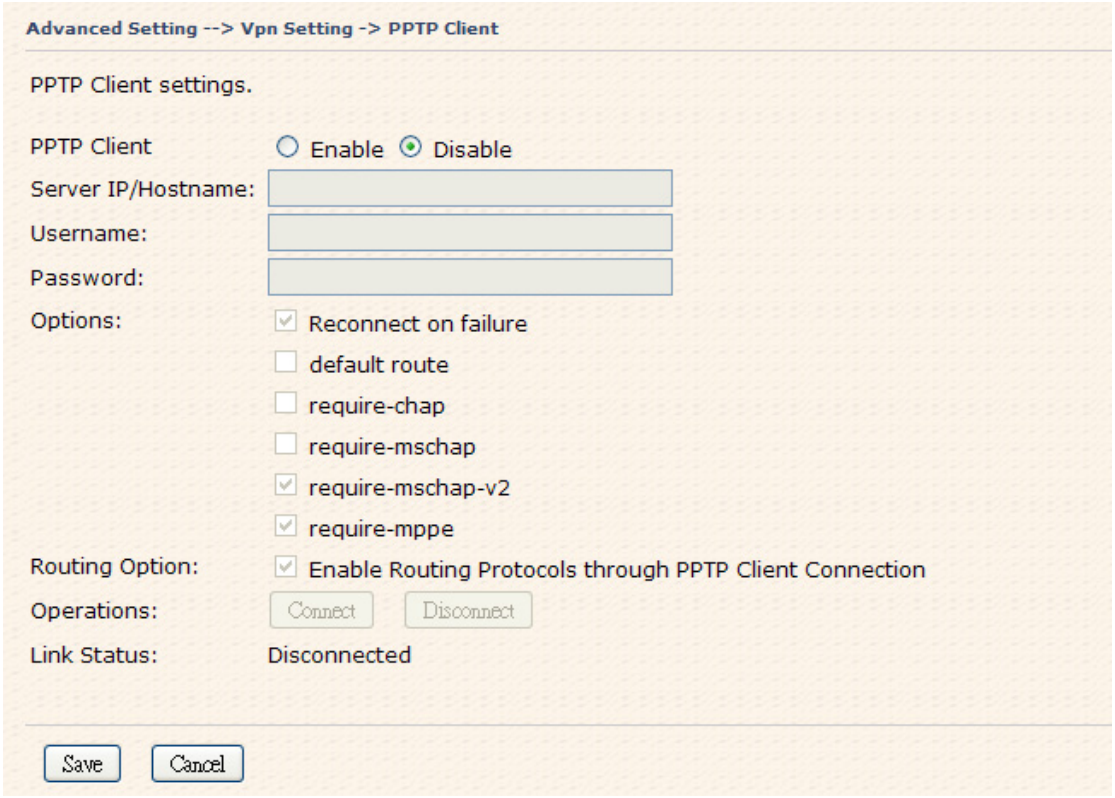

Connection to PPTP VPN Server

The following table describes the labels in this screen.

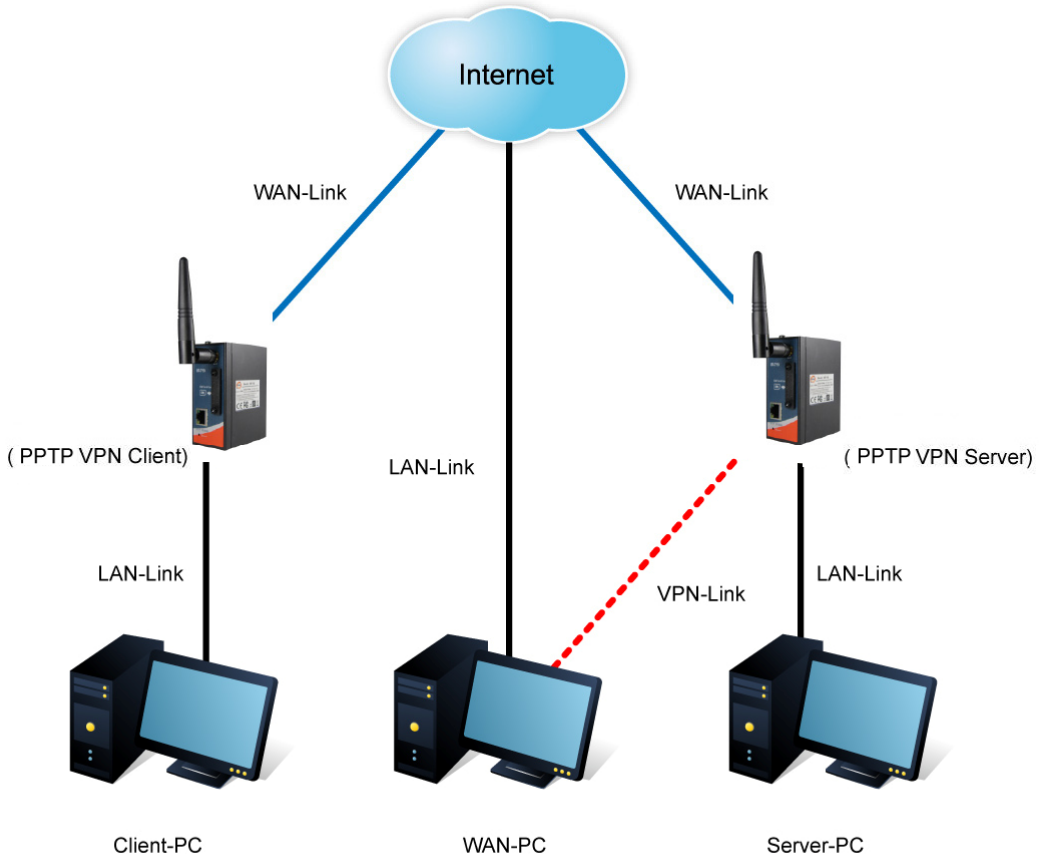
| Label | Description |
|---|---|
| **PPTP Server** | Enable or disable PPTP VPN Server. |
| **Server IP** | Enter the server side IP address, default is the LAN port IP. |
| **Client IP** | Enter the IP address range, format is as **192.168.10.xx-xx**, connected client will be assigned the IP address. |
| **CHAP-Secrets** | Enter the username and password pairs, format is as **user * pass ***, multiple username password pairs are allowed. |

### 3. PPTP Client

If the router A want to link with the others which is not in the same network with the router A, the function of PPTP client should support in the router page.




PPTP client settings screen




The following table describes the labels in this screen.

| Label | Description |
|---|---|
| **PPTP Client** | Enable or disable PPTP Client. |
| **Server IP/Hostname** | Enter the server IP address or hostname. |
| **Username/Password** | Enter the username and password which is signed by PPTP server. |
| **Option** | **Reconnect on failure:** Pitch on this option, it will be reconnect when the link is on failure.<br>**Require MPPE:** Choose Enable Require MPPE (Microsoft Point-to-Point Encryption) to encrypt data across Point-to-Point Protocol (PPP) and Virtual Private Network links. |
| **Operations** | Click "Connect" to link the server, if or not, you can click ""Disconnect" to break off from the server. |
| **Link Status** | Show the status about the link. |

## Routing Protocol (Routing Setting)

This page shows the information of routing table. The initial state of the router connect to the WAN, it will be based on the outside networks to access the routing table automatically. You can refer the shows about the bellow page.

Current Routing Table:

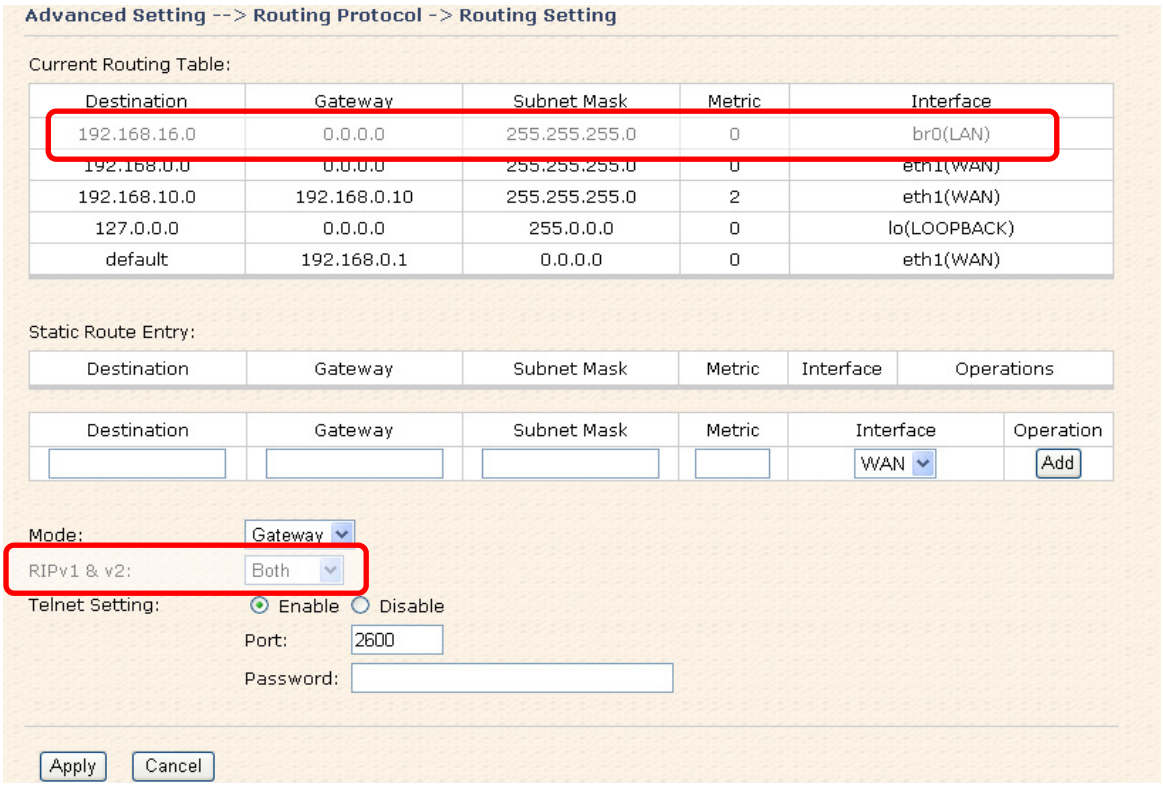
| Destination | Gateway | Subnet Mask | Metric | Interface |
|---|---|---|---|---|
| 192.168.16.0 | 0.0.0.0 | 255.255.255.0 | 0 | br0(LAN) |
| 192.168.0.0 | 0.0.0.0 | 255.255.255.0 | 0 | eth1(WAN) |
| 127.0.0.0 | 0.0.0.0 | 255.0.0.0 | 0 | lo(LOOPBACK) |
| default | 192.168.0.1 | 0.0.0.0 | 0 | eth1(WAN) |

The table shows the normal routing table

### 1. Use Dynamic Routing

Use the dynamic routing, you should not choose "Disable" about the **RIPv1 & v2** in the routers.

Click "Apply", and you can see the more information in the **Current Routing Table**, which shows the network segment of the other router.




Routing setting screen

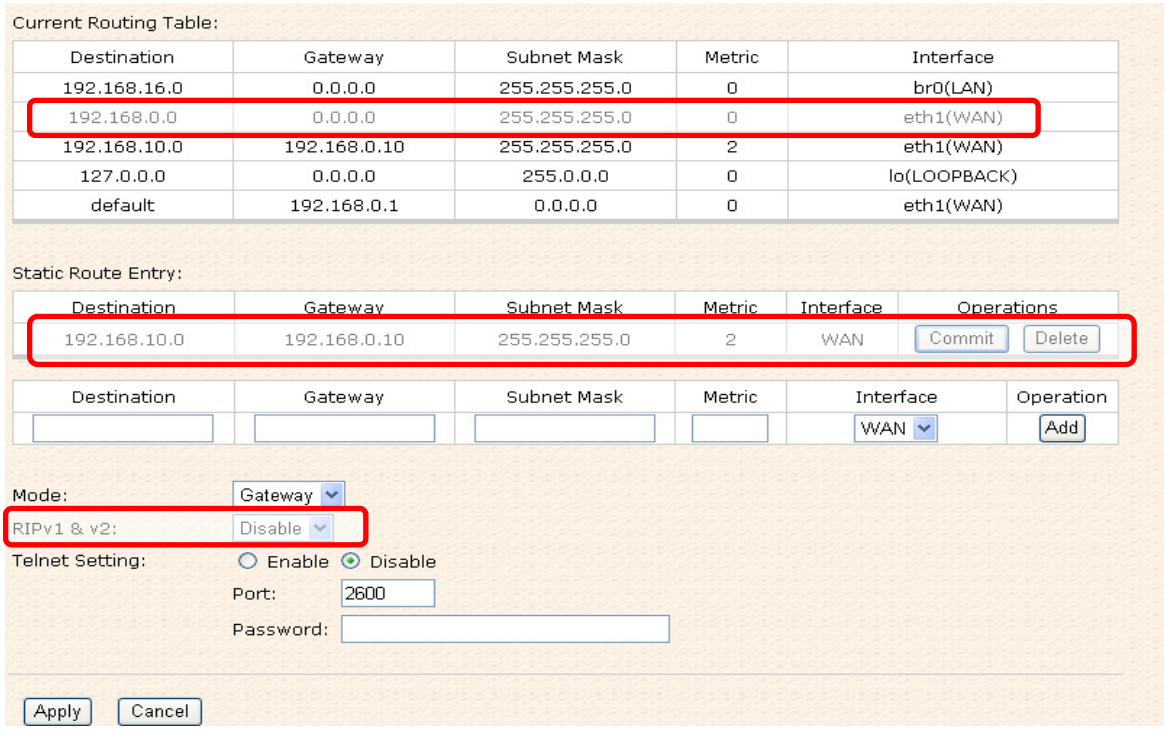
The following table describes the labels in this screen.

| Label | Description |
|---|---|
| **Current Routing Table** | Show the current the routing information. |
| **Static Router Entry** | Not RIP and enter the right value in the textbox will be showing. |
| **Mode** | If you want to the PC in the router can visit the outside network, only choose the **Gateway Mode**; if or not, you choose the **Router Mode.** |
| **RIPv1 &v2** | Choose "Disable" in the Static routing. |
| **Telnet Setting** | Only use in the Dynamic routing. |

## 2. Use Static Routing

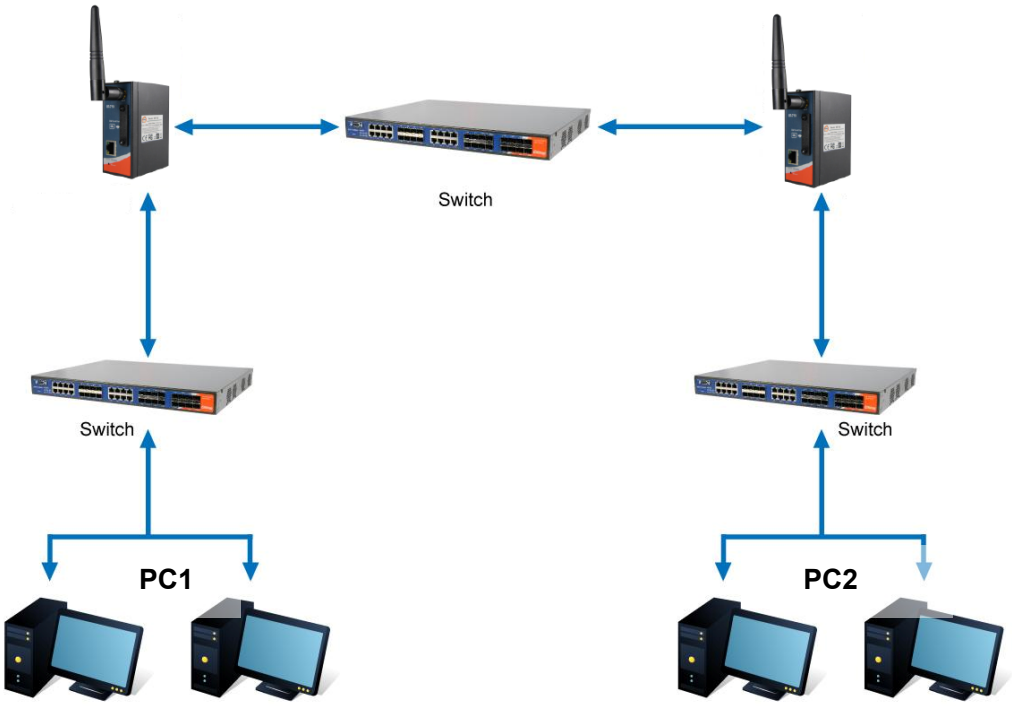
Use the Static routing, you should choose "Disable" about the **RIPv1 & v2** in the routers.

Click "Apply", and you can see the more information in the **Current Routing Table** and **Static Route Entry**, which shows the network segment of the other router.



Static route setting screen

Use the dynamic routing; it will have many ways such as RIP, OSPF.BGP. In this router, we use the RIP Protocol to finish the dynamic routing table.



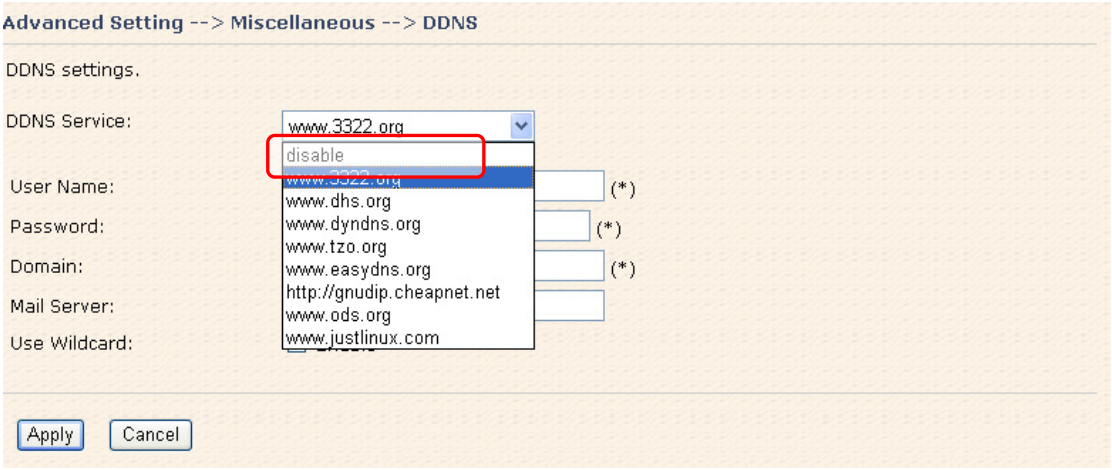

The Routing Topography

**RIP**, Routing Information Protocol, is a dynamic routing protocol used in local and wide area networks. As such it is classified as an interior gateway protocol (IGP) using the distance-vector routing algorithm.

After all settings, PC1 can visit PC2 which is different network segment of the PC1.

## Miscellaneous DDNS

Dynamic Domain Name Server is to keep a domain name linked to a dynamic IP address.




DDNS Screen

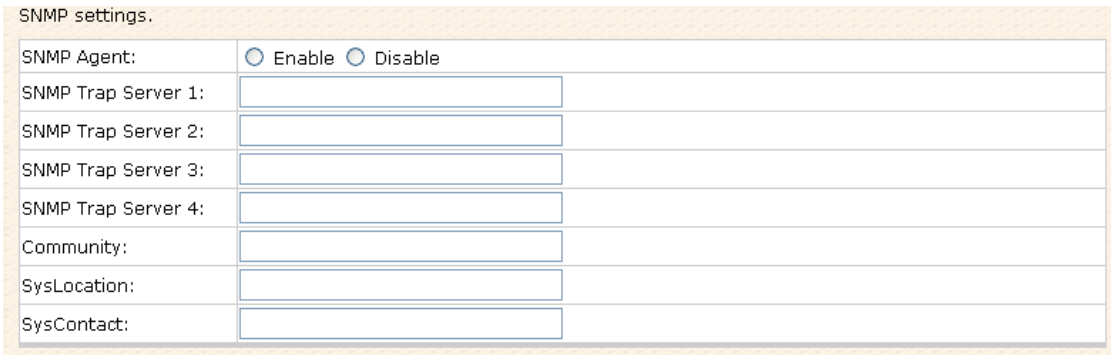
For example, Choose DDNS Service: www.3322.org and configure the following instructions:

The following table describes the labels in this screen.

| Label | Description |
|---|---|
| **User Name** | Enter the user name for your DDNS account. |
| **Password** | Enter the password for your DDNS account. |
| **Domain** | Enter the domain names provided by your dynamic DNS service provider. |
| **Mail Server** | Enter the mail server if provided. |
| **Use Wildcard** | Check the box the enable wildcard option. |

## Miscellaneous SNMP

### SNMP Settings




SNMP Settings

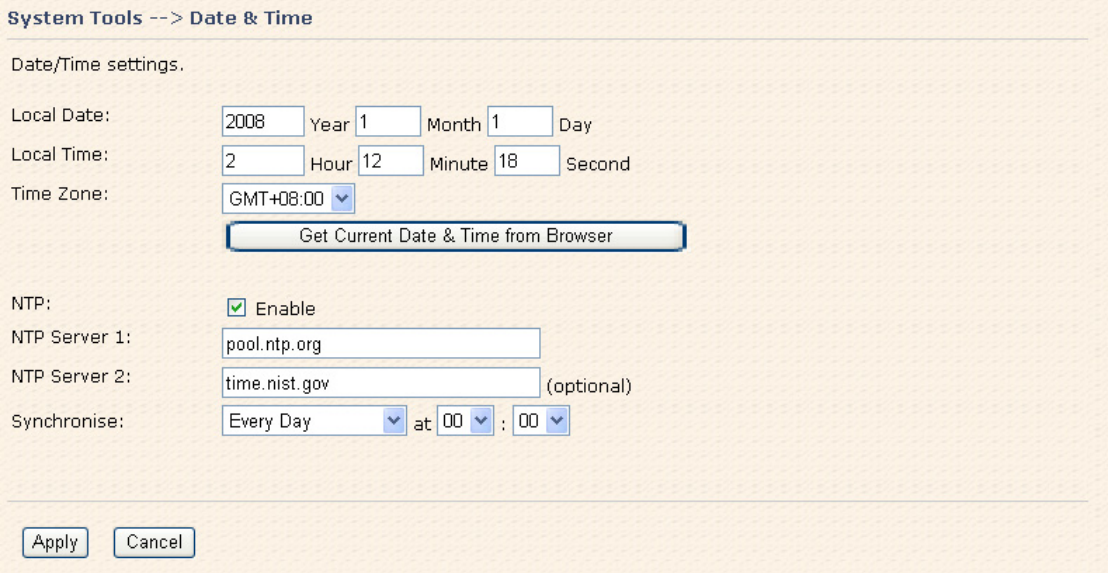
The following table describes the labels in this screen.

| Label | Description |
|---|---|
| **SNMP Agent** | SNMP (Simple Network Management Protocol) agent communicates with the SNMP manager. The agent provides management information to the NMS by keeping track of various operational aspects of the system. Turn on to open this service and off to disable it. |
| **SNMP Trap Server 1-4** | Specify the IP address of trap server, which is the address to which SNMP trap messages are sent. |
| **Community** | Community is essentially password to establish trust between managers and agents. Normally "public" is used for read-write community. |
| **SysLocation** | Specify sysLocation string. |
| **SysContact** | Specify sysContact string. |

## 5.3.3 System Tools

### Date & Time

In this page, you can set the date & time of the device. The correct date & time will be helpful for logging of system events. A NTP (Network Time Protocol) client can be used to synchronize date & time with NTP server through internet.



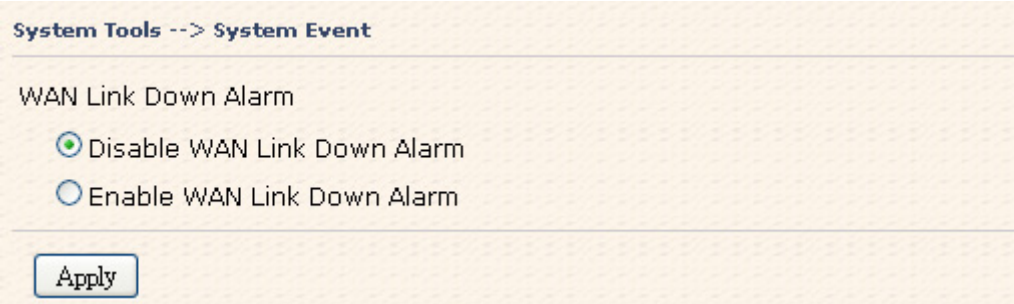

Date & Time Screen

The following table describes the labels in this screen.

| Label | Description |
|---|---|
| **Local Date** | Set local date manually. |
| **Local Time** | Set local time manually. |
| **Time Zone** | Select the time zone manually |
| **Get Current Date & Time from Browser** | Click this button; you can set the time from your browser. |
| **NTP** | Enable or disable NTP function to synchronize time from the NTP server. |
| **NTP Server 1** | The primary NTP Server. |
| **NTP Server 2** | The secondary NTP Server. |
| **Synchronize** | This is the scheduled time when the NTP synchronization performed. |

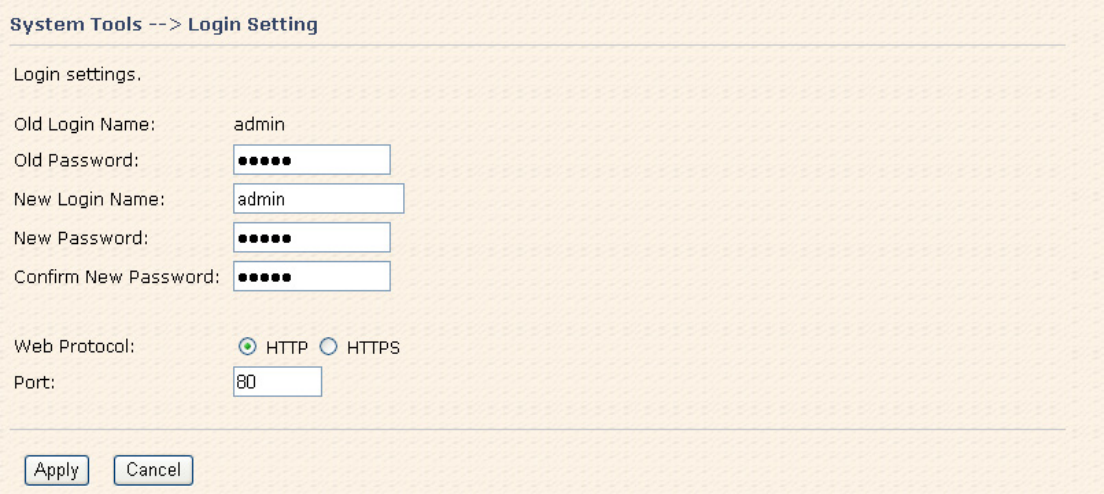
## System Event

When the WAN Link Down is triggered, the notification procedure will be performed




## Login Setting

At this page, the administrator can change the login name and password. The default name and password is **admin** and **admin**.




Login Setting Screen

The following table describes the labels in this screen.

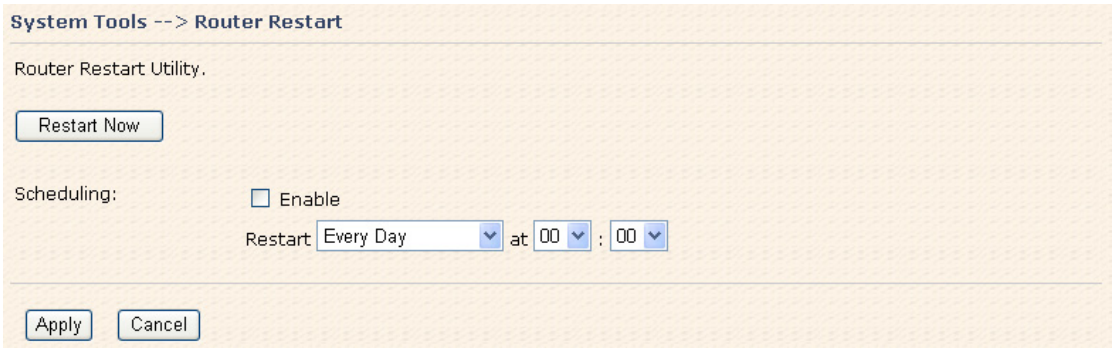
| Label | Description |
|---|---|
| **Old Name** | This field shows the old login name. |
| **Old Password** | Before making a new setting, you should provide the old password for verification. Acceptable characters of this field contains '**0-9**', '**a-z**', '**A-Z**' and must be between 0 to 15 characters in length. An empty password is also acceptable. |
| **New Name** | Enter a new login name. Acceptable characters of this field contains '**0-9**', '**a-z**', '**A-Z**' and must be between 1 to 15 |

| | |
|---|---|
| | characters in length. An empty name is not acceptable. |
| **New Password** | Enter a new login password. Acceptable characters of this field contains '**0-9**', '**a-z**', '**A-Z**' and must be between 0 to 15 characters in length. |
| **Confirm New Password** | Retype the password to confirm it. Acceptable inputs of this field contains '**0-9**', '**a-z**', '**A-Z**' and must be between 0 to 15 characters in length. |
| **Web Protocol** | Choose the web management page protocol. HTTP and HTTPS are both supported. |
| **Port** | Choose the web management page port number. For HTTP, default port is 80; For HTTPS, default port is 443. |

**HTTPS** (HTTP over SSL) is a Web protocol which encrypts and decrypts user page requests as well as the pages that are returned by the Web server.

## Router Restart

If you want restart the router through the **Warm Reset**, click **Restart Now** to restart the Wireless Router. Also, you can set a **Scheduling** time to make the router restart.




Router Restart Screen

## Firmware Upgrade

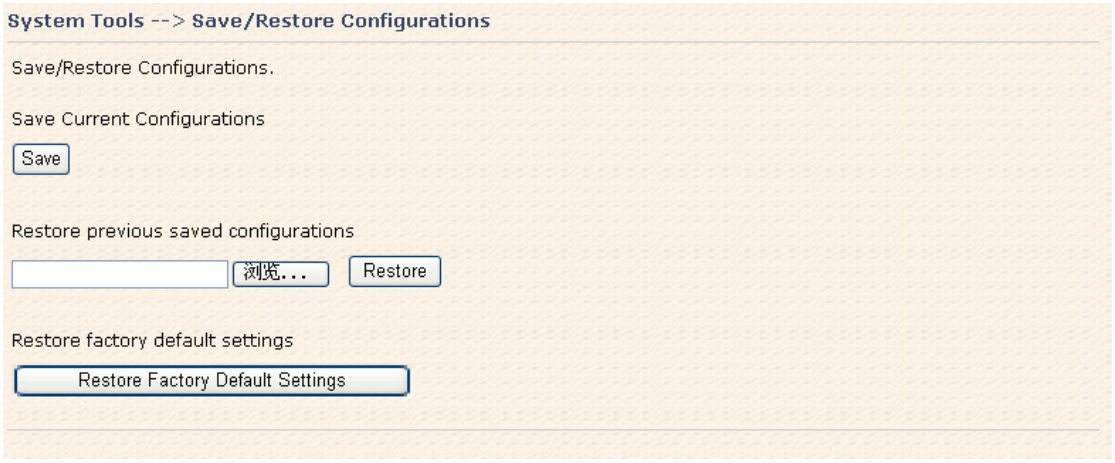
System Tools --> Firmware Upgrade
Do NOT power off the router while upgrading!
Current Firmware Version: 1.0f
瀏覽...
Start Upgrade

Firmware Upgrade Screen

Newer firmware may provide better performance or function extensions. To upgrade the new firmware, you need a firmware file which matches the model of this AP router. It will take several minutes to upload and update the firmware. After the upgrade is done successfully, reboot the router to utilized new firmware.

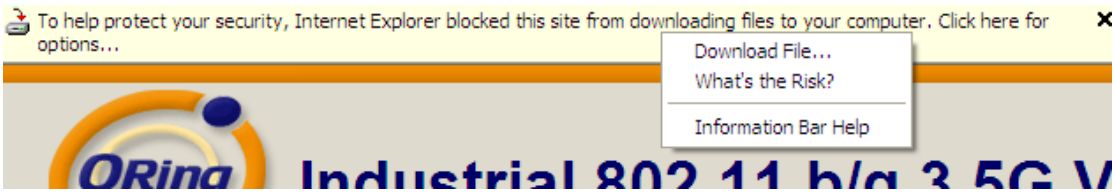
**Important Notice: DO NOT POWER OFF THE ROUTER OR PRESS THE RESET BUTTON WHILE THE FIRMWARE IS BEING UPGRADED.**

## Save/Restore Configurations




Save/Restore Configurations Screen

**Save:** The configuration file can be downloaded. (Internet Explorer user will need to click on the protection bar on top and click choose "download files")


To help protect your security, Internet Explorer blocked this site from downloading files to your computer. Click here for options...
Download File...
What's the Risk?
Information Bar Help

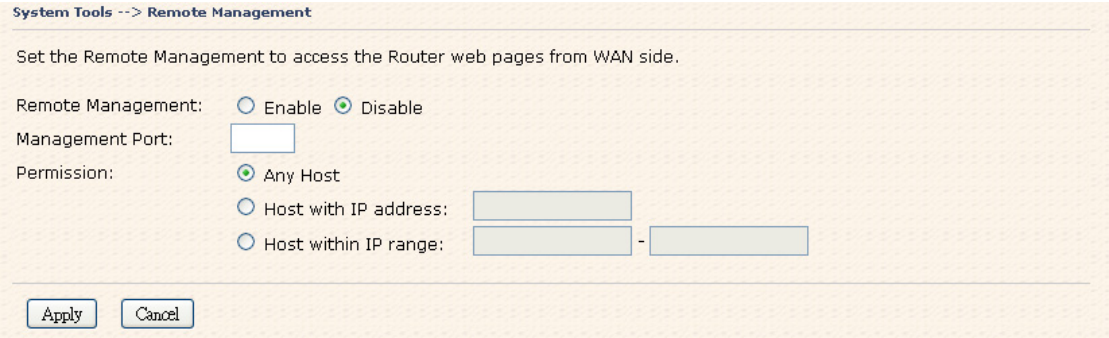
The following table describes the labels in this screen.

| Label | Description |
|---|---|
| **Download configuration** | The current system settings can be saved as a file into your PC. |
| **Upload configuration** | The configuration can be restored to the router. To reload a system settings file, click on **Browse** to browse your local hard drive and locate the system settings file previously saved. Click |

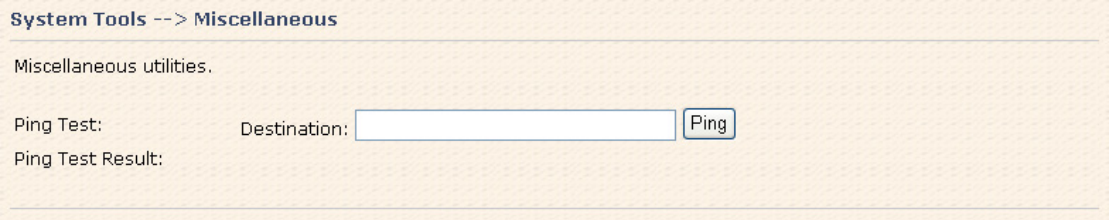
| | |
|---|---|
| | **Upload** when you have selected the file. |
| **Restore Default Settings** | You may also reset the router to the factory settings by clicking on **Restore Default Settings**. The router will reboot to validate the default settings. |

## Remote management

Set the Remote Management to access the Router web pages from WAN side.




## Miscellaneous (Ping)

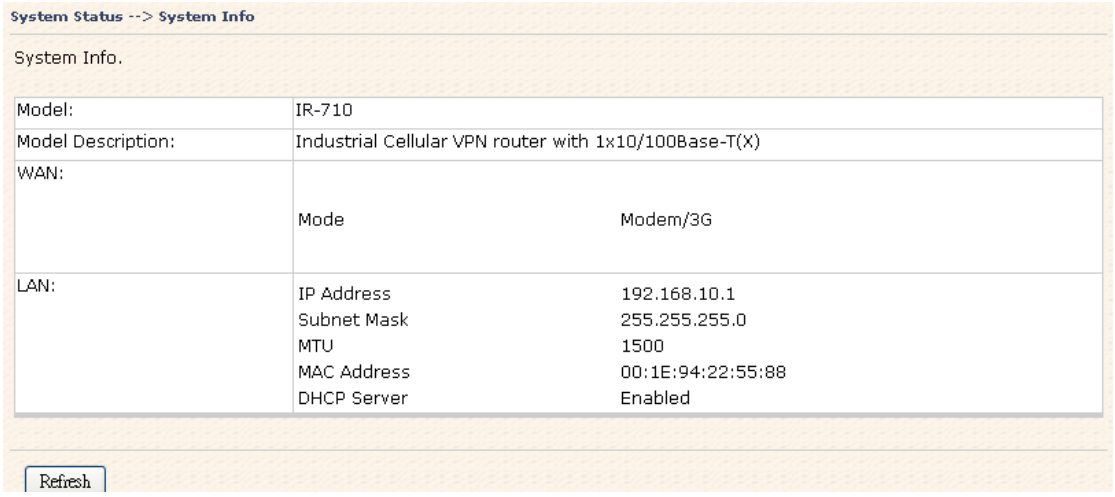



Miscellaneous Screen

The Ping Test is used to send Ping packets to test if a computer whether it is on the Internet or test if the WAN connection is OK. Enter a domain or IP in the destination box and click Ping to test.

## 5.3.4 System Status

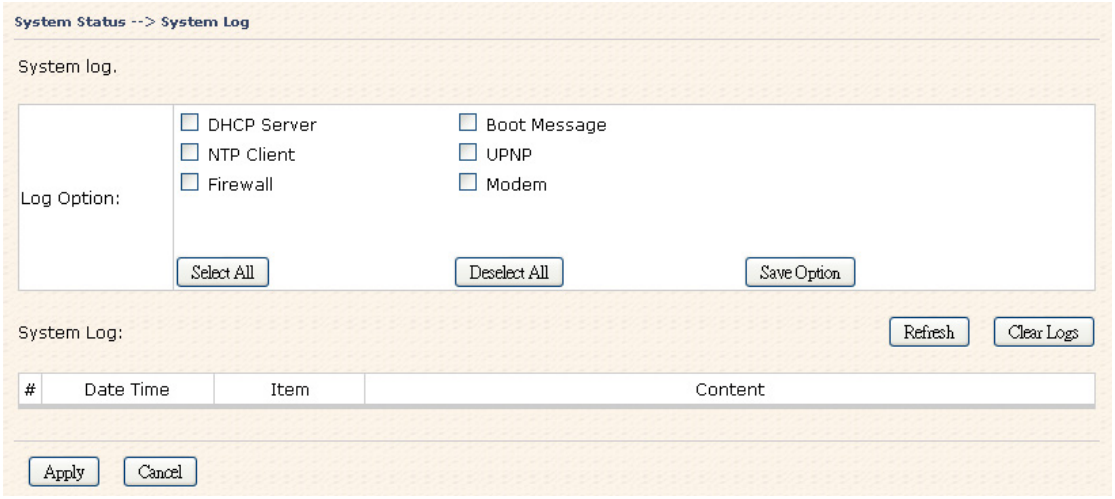
### System Info




System Info Screen

This page displays the details information for the router including model name, model description, firmware version, WAN, LAN settings.

### System Log



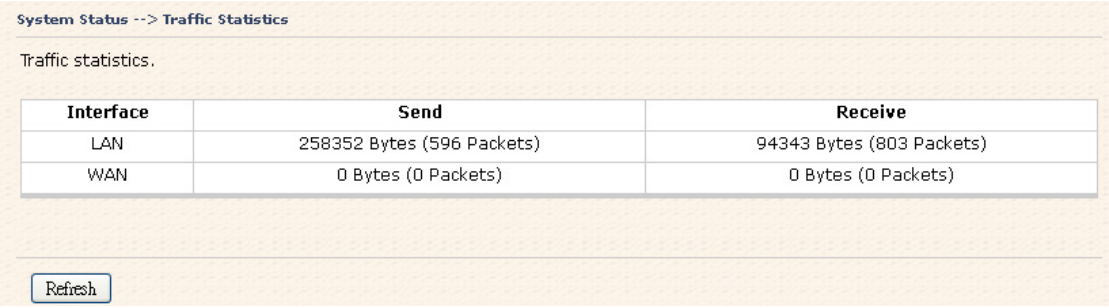

System Log Screen

The router keeps a running log of events and activities occurring on the router, several filters are provided for displaying related log entries.

Click the button '**Refresh**' to refresh the page.

Click the button '**Clear Logs**' to clear the log entries.

## Traffic Statistics




Traffic Statistics Screen

This page displays the network traffic statistics for both received and transmitted packets through the Ethernet port and wireless connections.

# Technical Specifications

| ORing Router Model | IR-710 | IR-711UB |
|---|---|---|
| **Physical Ports** | | |
| 10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX | 1 | |
| Sim Card Slot | 1 | |
| USB Host Port | | 1 x USB 2.0 Host Port |
| **Modem Support** | | |
| List | | USB modems and ISDN adapters which support the Communication Device Class Abstract Control Model interface<br>List of tested device<br>Hummingbird huc56s (Conexant)<br>Huawei E220/E230<br>Simense HSDPA-180C<br>Prolific 2303 + serial modem<br>Quanta MUQ101<br>Sony Ericsson MD400/MD400g<br>Sierra C885 |
| **Cellular Interface** | | |
| Cellualr Standard | GSM / GPRS/ EGPRS/ EDGE / WCDMA / HSDPA / HSUPA | |
| Band Option | Dual-band : HSUPA 1900/2100 MHz<br>Quad-band : GSM/GPRS/EDGE 850/900/1800/1900 MHz<br>WCDMA/HSDPA 850/900/1900/2100 MHz | |
| **LED Indicators** | | |
| Power Indicator | Green On: Power is on | |
| Status Indicator | Green: System status indication | |
| Fault Indicator | Red on : WAN connection link down | |
| WAN | Green on: Cellular modem link/act<br>Green blinking: Cellular modem is transmitting data | |
| USB Indicator | | Green on : USB Modem is present |
| **Fault Contact** | | |
| Relay | Relay output to carry capacity of 1A at 24VDC | |
| **Power** | | |
| Power Input | 12-48VDC power input on terminal block | |
| Power Consumption | 4.5W | 3.3W |
| **Physical Characteristics** | | |
| Enclosure | IP-30 | |
| Dimension (W x D x H) | 41(W)x70(D)x95(H) mm (1.61 x 2.75 x 3.74 inch.) | 26.1(W)x70(D)x95(H) mm (1.03x2.76x3.74 inches) |
| Weight (g) | 356g | 190g |
| **Environmental** | | |

| | | |
|---|---|---|
| Storage Temperature | -40 to 85°C (-40 to 185°F) | |
| Operating Temperature | -10 to 55°C (14 to 131°F) | -20 to 70 °C(-4 to 158 °F) |
| Operating Humidity | 5% to 95% Non-condensing | |
| **Regulatory approvals** | | |
| EMI | FCC Part 15, CISPR (EN55022) class A | |
| EMS | EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 | |
| **Warranty** | **5 years** | |